Besides the King's Chapel roost there are several other smaller ones that have later been established in Boston, namely, one in the Granery burying-ground, one in some trees on the Common, one in Franklin Square, besides doubtless others. The roost at Franklin Square is within fifty yards of the elevated train and at about the level of the frequently passing trains, yet I have seen the birds sleeping quietly there in the midst of the deafening racket.

In the early days the gathering in King's Chapel burying-ground were viewed with alarm, for it was feared that the imported darlings were about to migrate elsewhere, perhaps to the Mother Country. Alas this migration has never taken place!

THE VIRGINIA AND SORA RAILS NESTING IN NEW YORK CITY.

BY J. A. WEBER.

THE marshes inhabited by the rails are situated at the northern portion of Manhattan Island and extend northward and eastward from the foot of the hill at Fort George (190th Street and Amsterdam Avenue). These marshes formerly lined the shore of the Harlem River, but through street improvements have been separated from the river and cut up into small areas. The water in these marshes no longer rises and falls with the tide and the only connection with the river is through drain pipes under the streets; consequently the water is more or less fresh.

The rails first attracted my attention during the early part of June, 1902, when my brother who had climbed into an oak tree overlooking one of the marshes, shouted to me that he saw some water chickens running about in the swamp. I made a thorough search of the marshes on the 24th of the same month and secured a specimen, which proved to be the Virginia Rail (*Rallus virginianus*). It was the 4th of June, 1905, however, before I discovered any nest and eggs. This nest was found in the cattail marsh

situated on Ninth Avenue between 205th and 206th Streets. The eggs were scattered in and around the nest and had been emptied of their contents by some animal, probably by a muskrat. I found a dead rail in the vicinity but was unable to determine the cause of her death.

On June 1, 1907, I found a Virginia Rail on her nest, incubating ten eggs, in the patch of rushes about half a block south of the Dyckman Street subway station. The bird allowed me to approach within three feet of her, when I flushed her from the nest by a sudden movement on my part to gain a solid footing. She remained in the immediate vicinity of her nest while I adjusted my camera, strutting about with her feathers puffed up and wings spread like a turkey cock, giving her a rather formidable appearance: at the same time she uttered a low grunting sound which I had never heard from a rail before and quite unlike their characteristic notes. The male showed his interest by his sharp *kĕck-kĕck-kĕck-kĕck* calls, evidently trying to lead me away from the nest.

The nest was placed in the usual position near one of the streamlets which intersect all of these marshes, forming an irregular network, in the center of a circular bunch of growing cattails. It consisted of a mass of cattail blades and stems, placed layer upon layer, the foundation resting on the mud, so that the rim of the nest was 7 inches above the surface of the water. The inside of the nest was rather shallow, $4\frac{3}{4} \times 4\frac{1}{2}$ inches in diameter, and lined with cattail blade chips $\frac{1}{2}$ to 2 inches in length.

I discovered another nest of the Virginia Rail on June 6, 1908, in the small marsh bordering on Dyckman Street, with two baseball fields adjoining it on the east and south. The nest was placed within twenty feet of the street where hundreds of people as well as vehicles pass daily and large crowds often assemble to witness the Speedway trotting races or the baseball games. Yet the little mother rail quietly sat on her ten eggs, apparently unconcerned about the civilization around her. She was fully as tame as the former bird and acted in a similar manner. I tried to photograph her on the nest but she refused to return to the nest while the camera was near it; I had no difficulty however in taking snapshots of her as she crossed and re-crossed the narrow lanes through the cattails made by the ditches of water.

Within an hour after finding the above nest, I discovered a nest of the Sora (*Porzana carolina*), containing 14 eggs. This bird, unlike the Virginia Rail, was very shy, necessitating several visits to the swamp to accurately identify her. Approach the nest ever so stealthily, she would dart from the nest, and go off splashing through the water, before you were within fifteen feet of her, the only indication of her and her mate's presence being a call note at a distance from the nest.

The marsh in which this nest was built is situated on the south side of 207th Street between the foot of the new bridge across the Harlem River at this point and the 207th Street subway station. The marsh is so close to the subway station that some of the passengers noticed and watched me from the station platform while I was floundering about among the rushes. Yet strangely enough the noise of the numerous passing trains did not deter these shy birds from nesting in such close proximity.

The nest of this bird differed in many ways from the Virginia Rails' nests. It was suspended in a clump of cattails; the material composing the nest extended about 5 inches above and below the surface of the water, leaving the bottom of the nest about 11 inches clear of the mud below it. The foundation of the nest looked like a miniature hammock, and the bird probably formed it by simply trampling down the dead lower blades still adhering to the growing cattails. The composition of the nest, like that of the Virginia Rail's, consisted of cattail blades, but the lining of the nest presented a distinct departure, being made of fine marsh grasses in place of the chips of flat cattail blades. The inside of the nest was $3\frac{1}{2} \times 4$ inches in diameter and $2\frac{1}{2}$ inches in depth, and deeply cup-shaped in contrast to the rather flat form of the other bird. It was loosely arched over by the growing rushes surrounding it and concealing the bird so that it was difficult to identify her. A narrow runway of fallen dead cattails led to the nest; this appears to be a characteristic feature of all the nests of this family of birds I have found. The water in this swamp was 16 inches or more in depth throughout, due to a clogging of the drain pipe. I was unable to find any Virginia Rails in this swamp; evidently this depth of water is preferred by the Sora but not by the former bird.

The breast of the Sora is about $1\frac{1}{2}$ inches in diameter and it

seemed wonderful to me how the little bird managed to keep her fourteen comparatively large eggs warm. She succeeded, however, for they were found to be in various stages of advanced incubation. So deeply cup-shaped was the nest that the eggs around the edge were in an almost vertical position, thereby considerably reducing the horizontal area to be covered. Upon a subsequent visit to the nest, two of the eggs were found in the center of the nest lying on top of the others; a habit also shared by the domestic hen of placing one egg in this position. The bird probably shifted the eggs occasionally so as to get the others in this position to give them an extra amount of heat and render their hatching more certain.

Ridgway's 'Manual of the Birds of North America,' states the size of the Sora's eggs as 1.23 × .89 inches; the average size of the above set is 1.18 × .89 inches, but the loss in size of the individual egg is amply supplied by the larger number of eggs in the clutch, numbering 14 while Ridgway's 'Manual' quotes the number as 9 to 12. The measurements of two sets of Virginia Rail's eggs showed an average of 1.32 × .98 and 1.22 × .92 inches proving the eggs of this bird to be larger than the Sora's; but the difference in size is not as apparent as the difference in color and the distribution of the markings. The ground color of the Virginia's eggs is cream buff, that of the Sora is much darker, being deep brownish buff. The eggs of both species are abundantly spotted and speckled with chocolate brown and a few purplish gray and greenish spots and specks; but the spots of the Virginia's eggs form a dense cluster around the larger end, while on the Sora's they are evenly distributed over the egg with no tendency to cluster at the larger end.

During the past few years building operations and street improvements have encroached so much on the breeding grounds of the Rails, Red-winged Blackbirds and Meadowlarks, that I fear the breeding of these birds in this locality will soon terminate.